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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/577,009	02/15/2007	Reinhard Weiberle	10191/4639	5977

26646 7590 09/17/2008  
KENYON & KENYON LLP  
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NEW YORK, NY 10004

EXAMINER
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TREAT, WILLIAM M

ART UNIT	PAPER NUMBER
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2181

MAIL DATE	DELIVERY MODE
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09/17/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/577,009	<b>Applicant(s)</b> WEIBERLE ET AL.	
	<b>Examiner</b> William M. Treat	<b>Art Unit</b> 2181	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 July 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 19-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 19-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 July 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

Art Unit: 2181

1. Claims 19-36 are presented for examination.

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 19-36 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: what relationship the comparison of two values has to the invention as a whole. The comparison lacks function/purpose within the context of the invention.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Art Unit: 2181

6. Claims 19-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grochowski et al. (Patent No. 6,615,366) in view of Moy et al. (Patent No. 6,947,047).

7. Grochowski substantially taught the invention of exemplary claim 19 including: a method for switching between at least two operating modes of a processor unit that includes at least two execution units for running programs (col. 3, lines 57-67), comprising: assigning at least one identifier to at least the programs, the identifier allowing a differentiation between the at least two operating modes; switching between the operating modes as a function of the identifier such that the processor unit runs the programs according to the assigned operating mode (col. 9, lines 61-65).

8. Applicants have added "comparing two input values of the at least two execution units; wherein the identifier is a part of at least a program" or similar language to each of their independent claims. While applicants may have intended otherwise, the phrase, "comparing two input values of the at least two execution units" says nothing other than two input values used by the two execution units must be compared. The examiner takes Official Notice of the fact that instructions such as Branch-When-Equal, Branch-When-Greater, Branch-When-Less, etc., which require a comparison of two input values, are conventional instructions in prior art microprocessors such as Grochowski's Intel microprocessor. Applicants' claim language does not require one value be that which is input to one processor and one value that which is input to a second processor. Applicants' language is so broad as to cover the situation where the two values being compared are two values input to one processor as long as the second processor also has the same values as inputs. It is self-evident that Grochowski teaches such a

Art Unit: 2181

broad limitation. Applicants' claim language also fails to make clear any useful purpose for the comparison. Given the great abundance of instructions requiring or facilitating the comparison of two instructions, it is certainly a trivial matter for one of ordinary skill to compare two values. Absent any context in the claim language for such a limitation, there is little reason to see it as distinguishing over known prior art.

9. Should applicants choose to refine the claim language related to comparing two input values, the examiner would caution against thinking such refined language will, necessarily, distinguish over known prior art. There is ample evidence in the prior art of redundant checks in critical systems and checks to verify the correctness of data inputs. There is also strong motivation to make sure the actions of a computer system, which might control braking systems or control stability-when-turning for an automobile, are not faulty. The costs related to an extensive automobile recall and/or litigation could be severely damaging to a company's reputation and financial health.

10. As to the phrase, "wherein the identifier (which determines mode switching) is a part of at least a program", Grochowski did not teach that the identifier was a part of the program. However, Moy makes clear that embedding an identifier which determines mode switching in the program was a known technique for mode switching at the time of applicants' invention (col. 14, lines 15-30). Whether one switches modes using Grochowski's technique or Moy's technique is merely a design choice.

11. To assist applicants should they choose to challenge the examiner's Official Notice, the examiner is pointing out that following the KSR decision by the Supreme Court, the Office has changed its policy related to Official Notice. The Office now

Art Unit: 2181

requires applicants to provide persuasive evidence and/or arguments directly refuting the Official Notice before a supporting reference is to be supplied by the examiner.

12. As to claim 20, Grochowski taught the method as recited in Claim 19, wherein the programs contain task programs or constitute them, and the identifier is assigned to the corresponding individual task programs (col. 7, lines 19-27 and col. 9, lines 61-65).

13. As to claim 21, Grochowski taught the method as recited in Claim 19, wherein the programs are made up of individual program segments or contain them, and the identifier is assigned to the corresponding individual program segments (col. 3, lines 57-64 and col. 9, lines 61-65).

14. As to claim 22, Grochowski taught the method as recited in Claim 19, wherein the programs are made up of individual program instructions, and the identifier is assigned to the corresponding individual program instructions. Grochowski never defines a lower limit for his program segments in terms of number of instructions. His claim for a program segment in his claim 17 must inherently encompass a single instruction. Also, his embodiment where the OS recognizes the mode of execution and schedules appropriate mode switch instructions would enable a program segment as small as one instruction (col. 7, lines 8-18 and lines 28-39).

15. As to claim 23, Grochowski taught the method as recited in Claim 19, wherein the programs are part of an operating system of the processor unit or constitute the operating system (col. 3, lines 30-45).

16. As to claim 24, Grochowski taught the method as recited in Claim 19, wherein the programs are used for controlling operating sequences of a vehicle. Grochowski's

Art Unit: 2181

claim 1 is for a processor which can switch back and forth between a high reliability mode and a high performance mode, as applicants' system does. The language of Grochowski's claim 1 related to a processor is so broad as to inherently encompass a processor running programs to control operating sequences of a vehicle.

17. As to claim 25, Grochowski taught the method as recited in Claim 19, wherein a first operating mode is provided which corresponds to a safety mode in which the two execution units run identical programs redundantly (col. 3, lines 55-67).

18. As to claim 26, Grochowski taught the method as recited in Claim 25, wherein conditions or results obtained while the programs are run are compared for agreement, errors being detected if there is a discrepancy (col. 11, lines 10-20).

19. As to claim 27, Grochowski taught the method as recited in Claim 25, wherein the programs are run synchronously (col. 5, lines 62-64).

20. As to claim 28, Grochowski taught the method as recited in Claim 19, wherein in the second operating mode, which corresponds to a performance mode, each execution unit runs different programs (col. 5, lines 64-65).

21. As to claim 29, Grochowski taught the method as recited in Claim 19, wherein the identifier is in the form of at least one bit (col. 9, lines 61-65).

22. As to claim 30, Grochowski taught the method as recited in Claim 19, wherein a program instruction provided that generates an identifier indicating if the program is to be run in the first or second operating mode (col. 4, lines 50-62). Also, in the embodiment where a predicated mode switch instruction is used (col. 9, lines 61-65), it

Art Unit: 2181

is inherently compiler/translator instructions which predicate the code with one or more bits.

23. As to claim 31, Grochowski taught the method as recited in Claim 19, wherein the identifier is written to a specific memory area (col. 4, lines 50-62).

24. As to claim 32, Grochowski taught the method as recited in Claim 31, wherein the identifier is generated by an instruction provided in an instruction set of the processor unit (see paragraph 16, *supra*).

25. As to claim 33, Grochowski taught the method as recited in Claim 32, wherein the identifier is generated by a write instruction. Inherently, it will be some form of write instruction which writes to the CSB registers 124(a) and 124(b) (col. 4, lines 50-62).

26. As to claims 34-36, they fail to teach or define over rejected claims 1-33.

27. MPEP 2141 reads, in part, as follows:

The Supreme Court in *KSR* reaffirmed the familiar framework for determining obviousness as set forth in *Graham v. John Deere Co.* (383 U.S. 1, 148 USPQ 459 (1966)), but stated that the Federal Circuit had erred by applying the teaching-suggestion-motivation (TSM) test in an overly rigid and formalistic way. *KSR*, 550 U.S. at, 82 USPQ2d at 1391. Specifically, the Supreme Court stated that the Federal Circuit had erred in four ways: (1) "by holding that courts and patent examiners should look only to the problem the patentee was trying to solve" (*Id.* at \_\_ 82 USPQ2d at 1397); (2) by assuming "that a person of ordinary skill attempting to solve a problem will be led only to those elements of prior art designed to solve the same problem" (*Id.*); (3) by concluding "that a patent claim cannot be proved obvious merely by showing that the combination of elements was obvious to try" (*Id.*); and (4) by overemphasizing "the risk of courts and patent examiners falling prey to hindsight bias" and as a result applying "[r]igid preventative rules that deny factfinders recourse to common sense" (*Id.*).

In *KSR*, the Supreme Court particularly emphasized "the need for caution in granting a patent based on the combination of elements found in the prior art," *Id.* at \_\_ 82 USPQ2d at 1395, and discussed circumstances in which a patent might be determined to be obvious. Importantly, the Supreme Court reaffirmed principles based on its precedent that "the combination of familiar elements according to known methods is likely to be



Art Unit: 2181

obvious when it does no more than yield predictable results. *Id.* at \_\_82 USPQ2d at 1395.

28. The Supreme Court further stated that:

When a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. If a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability. For the same reason, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his ordinary skill. *Id.* at \_\_82 USPQ2d at 1396. When considering obviousness of a combination of known elements, the operative question is thus "whether the improvement is more than the predictable use of prior art elements according to their established functions." *Id.* at \_\_82 USPQ2d at 1396.

29. All the elements necessary to produce applicants' invention were known in the art. How one combined such elements to produce applicants' invention was also known in the art. Evidence of this is that applicants' disclosure lacks any detailed description of novel circuitry necessary to implement applicants' invention. One of ordinary skill would have readily recognized that the results of the combination were predictable. Absent some secondary considerations, not in evidence at this time, applicants invention is obvious over the combination of prior art presented.

30. Applicant's arguments filed 7/21/2008 have been fully considered but they are not persuasive.

31. See the preceding rejection of applicants' claims.

32. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Art Unit: 2181

33. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

34. Any inquiry concerning this communication should be directed to William M. Treat at telephone number (571) 272-4175.

35. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/William M. Treat/

Primary Examiner, Art Unit 2181